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(71) Applicant

Trico-Folberth Limited,

(Incorporated in United Kingdom),

Great West Road, Brentford, Middlesex TW7 5HN

(72) Inventor

Peter Mower

(74) Agent and/or Address for Service

**J. C. Pedder & Co., 38 Norbury Cross, Norbury,
London SW16 4JQ**

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(56) Documents cited

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(58) Field of search

A4F

Selected US specifications from IPC sub-class A47L

(54) **Cleaning device**

(57) A cleaning device (1) for cleaning windscreen wiper blades, squeegee blades, and sealing strips comprises a holder (2) carrying oppositely directed projections (6) engageable with opposite faces of a lip of the blade or strip whereby, when the device (1) is drawn longitudinally along the lip, the projections (6) scrape the lip thereby cleaning it. The projections may be interdigitated or directly opposed. The device may be separate or form part of another device e.g. it may be provided or formed in the handle of a squeegee. The holder may be channel-shaped, or it may take the form of a pair of tongs. The edge (9) of each projection may be slanted or vertical.

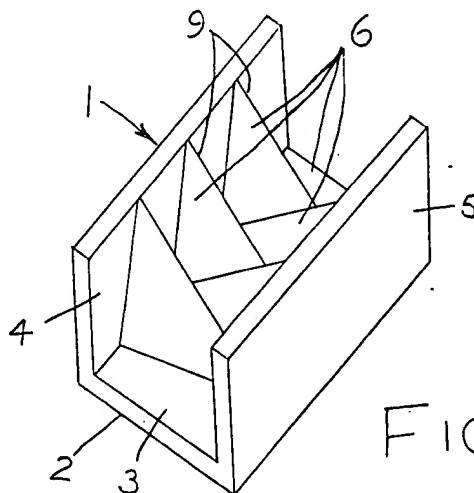
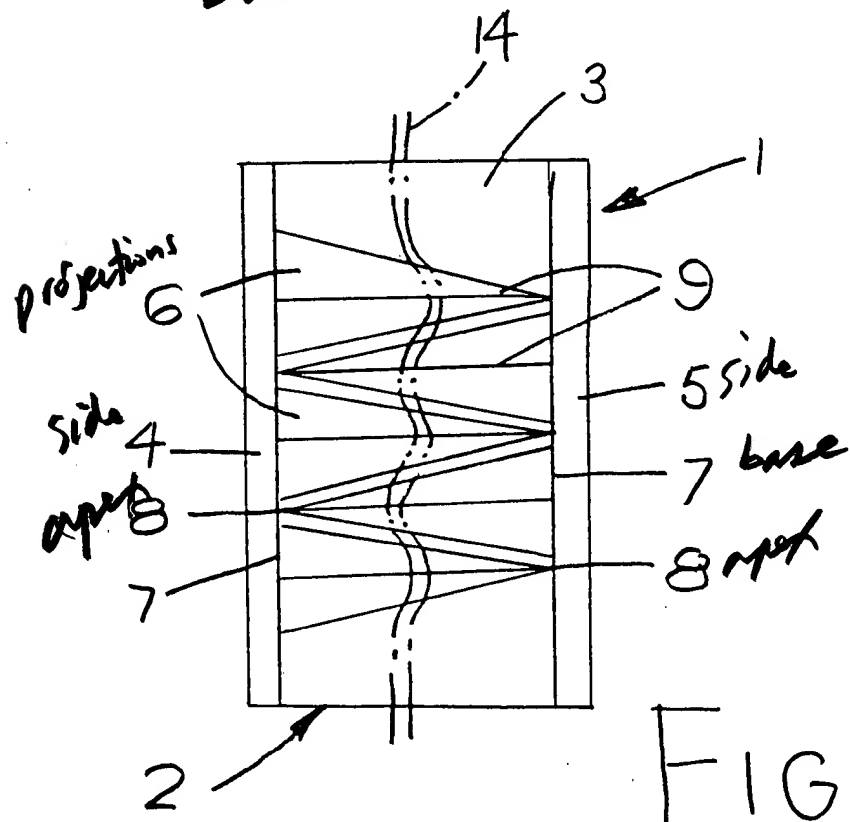
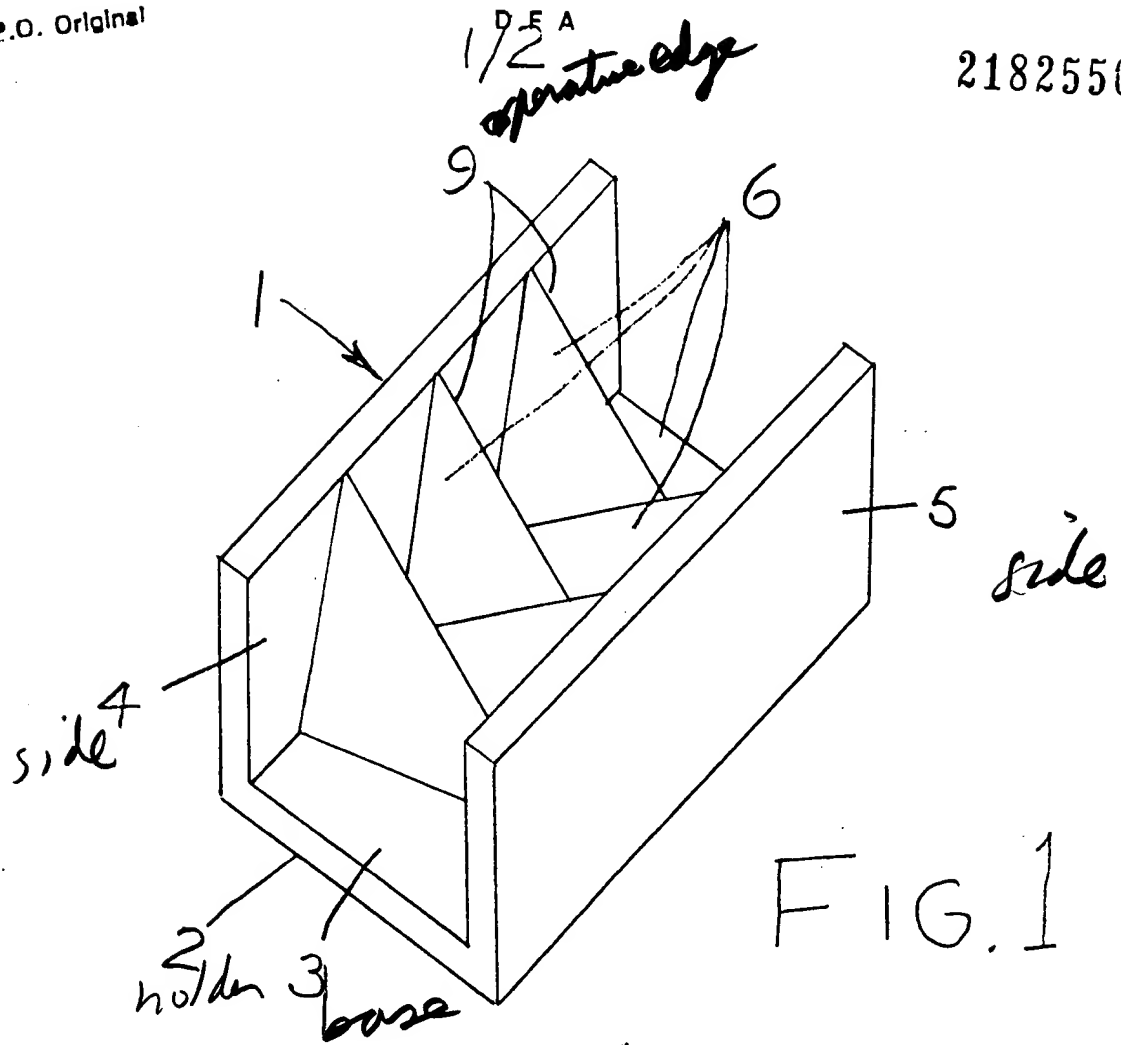


FIG. 1.

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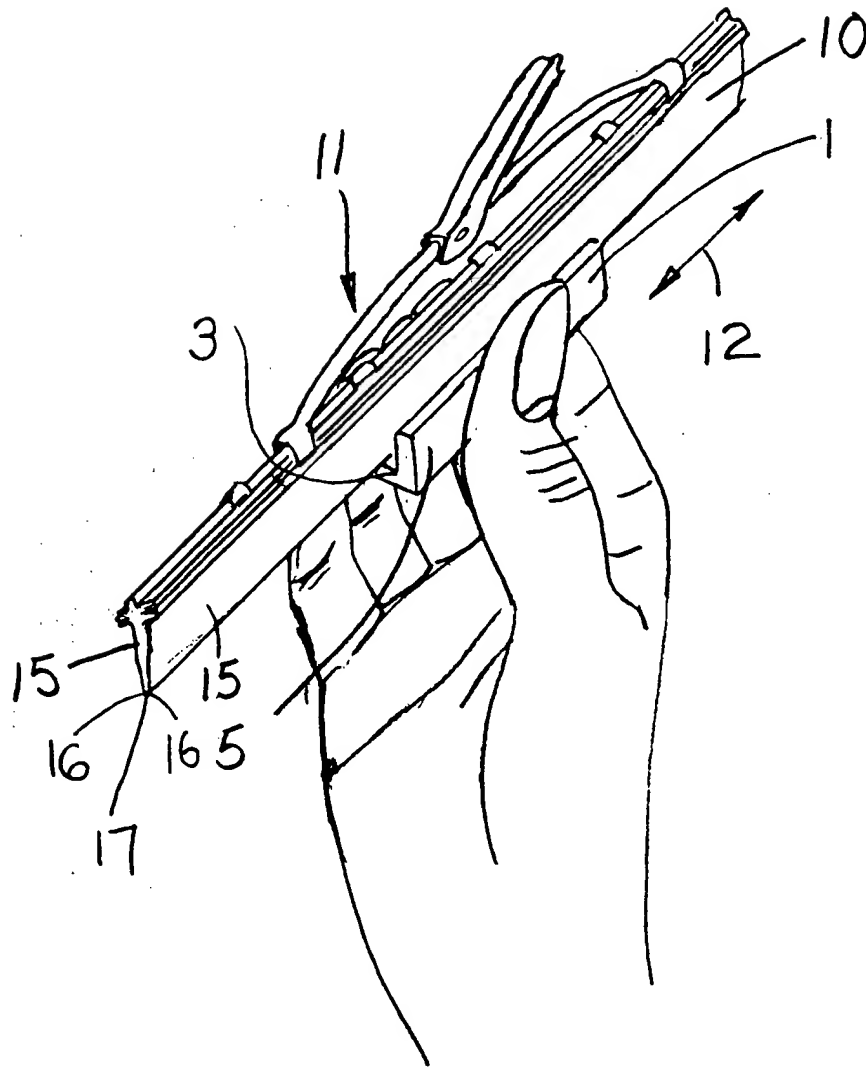


FIG. 3

SPECIFICATION

Cleaning device for windscreen wipers or the like

- 5 This invention relates to a cleaning device for windscreen wipers or the like and more particularly to a cleaning device for cleaning the wiper rubbers thereof. It is to be understood that the term "windscreen wipers or the like" is intended to include not only windscreen wipers themselves but also other articles having a thin strip which it is desirable to clean. Such articles include squeegees and sealing strips.
- 10 Windscreen wipers are subject, after a number of wiping operations, to build up of dirt on the rubber blade and this build up, after a time, causes deterioration of the effectiveness of the wipe and in severe cases, causes scratching of the windscreen itself.
- 15 No real provision has been made for the cleaning of blade rubbers, it being entirely left to the owner to find some means of overcoming this problem. Methods which have been proposed include the use of solvents to remove the dirt or the scraping of the rubber with a finger nail. Neither of these methods has proved altogether satisfactory.
- 20 The present invention seeks to provide a cleaning device for windscreen wipers or the like in which the above mentioned problems are reduced or substantially obviated.
- 25 According to the invention, there is provided a cleaning device for windscreen wipers or the like comprising holding means carrying a plurality of oppositely directed projections engageable with opposite faces of a lip on the article to be cleaned, whereby, when the device is drawn longitudinally along the lip, the projections have a scraping action on the surfaces of the lip.
- 30 Further according to the invention, a cleaning device for windscreen wipers or the like comprises a channel shaped holder having a plurality of oppositely directed projections projecting inwardly from the sides of the holder for engagement with opposite surfaces of a lip on the article to be cleaned, whereby, when the device is drawn longitudinally along the lip, the projections have a scraping action on the surfaces of the lip.
- 35 Preferably, the projections are such that cleaning is provided of the edges of the tip of the lip as well as of its side surfaces.
- 40 The projections may be interdigitated, at least at their outer ends. The projections may be triangular in plan and extend from the upper edge of one side of the channel to the lower edge of the other side of the channel.
- 45 The invention will now be described in greater detail, by way of example, with reference to the drawings, in which:-
- 50 *Figure 1* is a perspective view of one form of cleaning device in accordance with the invention for cleaning the wiping lip of the blade rubber of a windscreen wiper;
- 55 *Figure 2* is a plan view of the device shown in *Figure 1*, and
- 60 *Figure 3* is a perspective view of the device in use.
- 65 Referring to the drawings, there is shown a clean-

ing device 1 comprising a channel shaped holder 2 including a base part 3 and two sides 4 and 5. Five projections 6 extend across the channel, two projections from the side 5 and three from the side 4.

- 70 As can be seen, particularly from *Figure 2*, the projections 6 are triangular in plan and extend from a base 7 on one side of the channel to an apex 8 on the other side of the channel. In elevation, the projections 6 are in the form of right angle triangles with the adjacent sides in contact with the base 3 of the channel and one or other of the sides 4 and 5.

It will thus be seen that the projections 6 are interdigitated and have an operative edge 9 which extends from the top of a channel side at one side to the bottom of the channel side on the opposite side.

- 80 In use, the wiper rubber 10 of a wiper blade 11 (see *Figure 3*) is inserted into the channel of the cleaning device 1 and the device is drawn along the rubber 10 in the directions of the double headed arrow 12. The rubber, being flexible, will follow a meandering path around the projections 6 as indicated by the chain lines 14 in *Figure 2*. During the course of this, the edges 9 of the projections 6 will have a scraping action on the wiper rubber 10 to remove built up dirt.
- 85 Not only will the sides 15 of the wiper rubber be scraped but also the edges 16 of the tip 17 will be engaged by the edges 9 of the projections 6 and cleaned.

- It will be appreciated that various modifications may be made to the above described embodiment without departing from the scope of the invention. For example, the number of projections provided may be varied from a minimum of two upwards. The projections may be fully interdigitated as shown or alternatively only partial interdigitation may be used.

If desired, the projections could be spring urged towards each other either by making the individual projections resilient or providing for the sides 4 and 5 of the channel shaped holder to be resilient. With resilient sides, a variable pressure could be exerted by the user's hand so as to achieve optimum cleaning.

The shapes of the projections could be varied. For instance, the slant edge 9 of the projections could be at a much steeper angle than shown. It could even be vertical where pressure is brought to bear on the projections either by the resilience of the holder or by manual pressure.

It is not essential to have a channel shaped holder. For example, the holder could consist of two side members carrying the projections and a resilient bridge element connecting the two side members together so that the device operates like a pair of tongs. Alternatively, the sides of the channel shaped holder could be hinged together.

- 120 Where pressure is applied between the projections, the projections could be directly opposed instead of being staggered or interdigitated.

Although the device is intended particularly as a device in its own right, it will be understood that it could form part of another device, e.g. be provided or formed in the handle of a squeegee.

While the invention has been described for cleaning the rubbers of windscreen wiper blades, the device could equally well be used for cleaning other appliances such as the squeegees used by domestic